

Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-2. (Cancelled)

3. (Currently Amended) A method for determining optimal harvest window of *Echinacea* plants, wherein the *Echinacea* plants are method is used to prepare a standardized *Echinacea* extract, the method comprising the steps of:

harvesting at least one *Echinacea* plant at a plurality of maturation stages for the *Echinacea* plant;

producing a preparation of the *Echinacea* plant for each maturation stage;

adding a preparation to a monocyte cell culture;

harvesting the cell culture;

analyzing the cell culture for a level of immune-stimulatory product induced by the preparation;

observing the level of the immune-stimulatory product corresponding to each of the different maturation stages;

determining a concentration of a marker compound of each preparation at the plurality of maturation stages; and

selecting a maturation stage with:

(i) a concentration of marker compound that is greater than zero and acceptable for standardization of the preparation preparing a standardized extract of the medicinal plant; and

(ii) the highest level of immune-stimulatory product

and preparing a standardized extract of the medicinal plant at the selected maturation stage.

4. (Cancelled)

5. (Previously Presented) The method of claim 3 wherein the marker compound is selected from a group consisting of chicoric acid, alkylamides, glycoproteins, polysaccharides and combinations thereof.

6. (Previously Presented) The method of claim 3 wherein the immune-stimulatory product is selected from the group consisting of cytokine mRNA and chemokine mRNA.

7. (Previously Presented) The method of claim 3 wherein the immune-stimulatory product is an mRNA transcript selected from the group consisting of IL-1 alpha, IL-1 beta, IL-6, IL-8, IL-10, tumor necrosis factor alpha, interferon-gamma and macrophage inflammatory protein-1.

8-22 (Cancelled)

23. (Previously Presented) The method of claim 1, wherein the monocyte cell culture is a THP-1 cell culture.

24. (Currently Amended) A method for determining optimal harvest window of *Echinacea* plants, wherein the *Echinacea* plants are method used to prepare a standardized *Echinacea* extract, the method comprising the steps of:

harvesting at least one *Echinacea* plant at a plurality of maturation stages for the *Echinacea* plant;

producing a preparation of the *Echinacea* plant for each maturation stage;

adding a preparation to a monocyte or macrophage cell culture;

harvesting the cell culture;

analyzing the cell culture for a level of a translation product induced from the cell culture by each preparation;

observing the level of translation product corresponding to each of the different maturation stages;

determining a concentration of marker compound for each preparation at the plurality of maturation stages; and
selecting a maturation stage with:

- (i) a concentration of marker compound that is greater than zero and acceptable for standardization of the preparation preparing a standardized extract of *Echinacea*; and
- (ii) the highest level of translation product induced from the cell culture

and preparing a standardized extract of *Echinacea* at the selected maturation stage.

25. (Previously Presented) The method of claim 24, wherein the monocyte or macrophage cell culture is a THP-1 cell culture.